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| 10/731,485 | 12/10/2003 | Heinrich Lutz | P69361US0 | 5376 |

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| EXAMINER |
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JULES, FRANTZ F

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| ART UNIT | PAPER NUMBER |
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3617

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,485

Applicant(s)

LUTZ ET AL.

Examiner

Frantz F. Jules

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/202004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In the abstract, line 1, the designation "Tithe: "conveying Device" should be deleted.

In the abstract, line 2, the designation "(no Fig.)" should be deleted.

Appropriate correction is required.

Claim Objections

2. Claims 1-32 are objected to because of the following informalities:

In claim 1, line 2, the phrase "in particular cutting," should be deleted to improve the clarity of the claim language.

In claim 1, line 5, the word "wherein" should be added in front of a primary part to improve the clarity of the claim language.

In claim 30, lines 2-3, the phrase "the workpiece carrier in transfer direction (A) on the back end (1) a running element (12) is provided" should be replaced by --the back end of the workpiece carrier has a running element in the transfer direction thereof-- to improve the clarity of the claim language.

Claim 32 should be replaced by --Conveying device according to claim 1, wherein the production or machine line connects at least two machining stations—to improve the clarity of the claim language.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the secondary part" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 14, the phrase "and the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "and the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

In claim 26, line 3, the phrase "the jam path " is confusing as it is unclear how it relates to previously recited jam paths above.

Claim 27 recites the limitation "the linear and secondary part" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5-9, 14-20, 24, 27, 29-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Takeuchi et al (US 4,841,869).

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Conveying device for a production or machining line with at least one, machining station, the conveying device (A) serving for the conveying of workpieces with conveying aids (4), like pallets and workpiece carriers, wherein a primary part (C) of a linear motor being provided along the conveying path which creates a magnetic field and the conveying aid (4) being formed by a secondary part of the linear motor.

The conveying device serves for conveying of workpieces between the different as well as for a positioning of the workpieces in the machining station or for movement of the workpieces in the station in accordance with claims 2-3.

a surface of the secondary part has profilings (D) which in the co-operation with the magnetic fields of the primary part (C) provide the conveying force for the movement of the conveying aid in accordance with claims 7-8.

The conveying device can be subdivided into different sectors along the conveying path of the conveying line since intermediate primary coils (C3) are used to accelerate the conveyor cart (A), see col 3, lines 55-69 in accordance with claims 8-9.

The secondary parts are formed by sledges on which the conveying aids (4) are arranged by means of mechanic catches, drivers and the like in such a way that they can be engaged and disengaged.

That between the stationary primary part (C) and the movable secondary part an air gap is formed which is set by rollers (7) or slide guides in accordance with claim 15.

That between the stationary primary part (C) and the movable secondary part an air gap (3) is formed which is set by rollers (7) or slide guides and the rollers (7) are designed in a profiled way in order to take over the lateral guide of the conveying aids (4).

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That a position control is provided, comprising at least one position answering device which is arranged on the conveying aid (5) and with sensors arranged on the primary part including an adjustment device (18) as disclosed in col 5, lines 51-63, col 6, lines 7-28 in accordance with claims 17-20.

Jam paths are provided in the conveyor device as the conveying aids can be lined up in the conveyor paths if jamming occur.

That wedge surfaces are provided between a chassis (3) and workpiece carrier which are designed mounting in the direction of the transfer direction (A).

A running element (9) is provided on the back end of the workpiece carrier in accordance with claim 30.

7. Claims 1-13, 15-20, 24, 27, 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Dorries et al (DE 29 45 109 A1).

Conveying device for a production or machining line with at least one, machining station, the conveying device (15) serving for the conveying of workpieces (23) with conveying aids (16), like pallets and workpiece carriers, wherein a primary part of a linear motor being provided along the conveying path which creates a magnetic field and the conveying aid being formed by a secondary part of the linear motor as disclosed in the abstract.

The conveying device can be subdivided into different sectors along the conveying path of the conveying line and at least one coil (not shown) which forms a magnetic field is assigned to each sector and the magnetic fields can be separately switched on and

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off respectively as disclosed by the abstract which uses detectors to turn on and off the linear motor as the workpiece approaches and leave a station.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi et al (US 4,841,869) in view of The Admitted Information (pg 1-2 of spec). Takeuchi et al teach all the limitations of claims 31-32 except for a conveying device which connects at least two machining stations. The general concept of using a conveying device in connecting at least two machining stations is well known in the art as illustrated by The Admitted Information which discloses the use of a linear motor conveyor in conjunction with a machine tool. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Takeuchi et al to include the use of connecting at least two machining station in his advantageous conveyance system as taught by admission in order to create a fully automated work station thereby eliminating the use of human operator.

10. Claims 21, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi et al (US 4,841,869) in view of Lemelson (US 3,587,856).

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Takeuchi et al teach all the limitations of claims 31-32 except for a conveying device comprising at least one scanning element and a stopper in the conveyor line. The general concept providing a scanning element and a stopper in the conveyor line is well known in the art as illustrated by Lemelson which discloses the teaching of using scanning operation and stopping devices to a conveyor line. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Takeuchi et al to include the use of at least one scanning element and a stopper in the conveyor line in his advantageous conveyance system as taught by Lemelson in order to improve the performance of a fully automated work station thereby eliminating the use of human operator.

Allowable Subject Matter

11. Claims 22-23, 26, 28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Furukawa is cited to show a related conveyor system comprising position detection means.

Jaton is cited to show related conveyor means with linear motor between process stations.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz F. Jules whose telephone number is (703) 272-6681. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Morano can be reached on (703) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

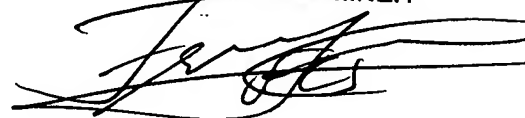
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frantz F. Jules
Primary Examiner
Art Unit 3617

FFJ

June 2, 2005

FRANTZ F. JULES
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Frantz F. Jules', is written over the printed name and title.